

Date: Wednesday, 19/11/2008 9:58:33 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : CUSHION
 Job Number : 43542
 Estimate Number : 13647
 P.O. Number :
 This Issue : 19/11/2008 S.O. No. :
 Prsht Rev. : NC Part Number : D3755041
 First Issue : // Type : PURCHASED PARTS Drawing Number : D3755 REV. B *1 D3753 Rev C*
 Previous Run : Project Number : N/A
 Material :
 Due Date : 28/11/2008 Qty: 5 Um: Each
 Written By :
 Checked & Approved By : *JLD 08.11.17*
 Comment : Est: A 08.11.17 New issue EC verified by:

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: PURCHASING

Issue P/O: *7631*

Manufacture D3753-1 as per Dwg D3753

Material: Airflex fire-resistant aircraft cushioning, grade ~~30-40~~ *40-50 laminated to 55-65* *4/8/12.16*
 layers to be laminated with silaprene DC12906 spray grade HPL contact adhesive *5*

Possible Supplier: Chestnut Ridgefoam

Material release note is required

2.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect for Transit Damage

Ensure Material Release Note is attached

3.0 QC6 DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

4.0 D38001200 Hook and Loop Strip (2" Soft)



Comment: Qty.: 0.5250 f(s)/Unit Total: 2.6250 f(s)

Hook and Loop Strip (2" Soft)

Cut strip 6.00" long ***QTY 2***

Batch: *43559*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 19/11/2008 9:58:33 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CUSHION

Job Number: 43542

Part Number: D3755041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

D38001100

Hook and Loop Strip (1" Soft)



Comment: Qty.: 2.6250 f(s)/Unit Total: 13.1250 f(s)

Hook and Loop Strip (1" Soft)

Cut strip 30.00" long

Batch: B43558

6.0

D38003100

Hook and Loop Strip (1" Hard)



Comment: Qty.: 2.6250 f(s)/Unit Total: 13.1250 f(s)

Hook and Loop Strip (1" Hard)

Cut strip 30.00" long

Batch: 93560

7.0

PG

PURCHASING



Comment: Issue P/O: 7851

Upholster as per Dwg D3755

Supplier: Lefebvre uphol

Ship: -Qty 1 D3753-1 seat cushion

-Qty 2 D3800-1-200-060 Loop strip B43559

-Qty 1 D3800-1-100-300, Loop strip B43558

-Qty 1 D3800-3-100-300, Loop strip B43560

Material release note is required

8.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 09-01-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

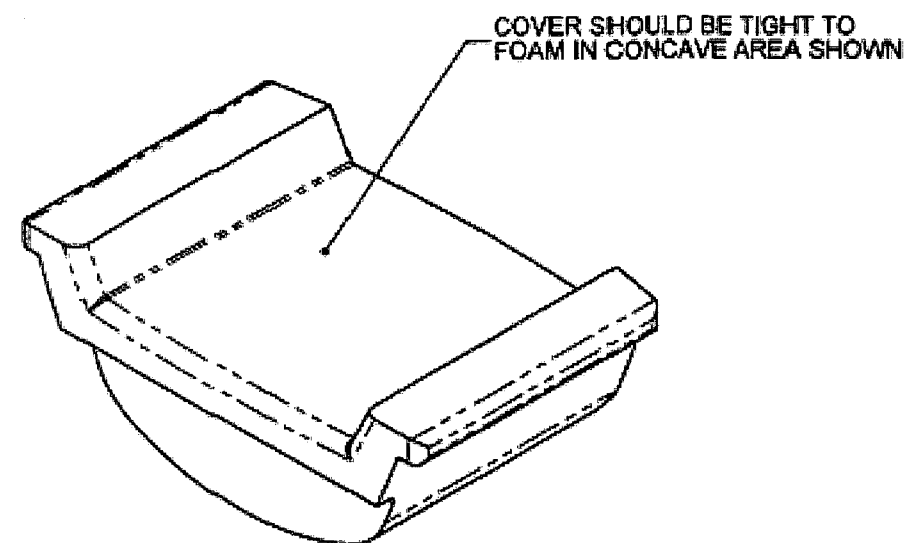
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

PARTS LIST

ITEM	QTY -041	QTY -1	P/N	DESCRIPTION
1	X		D3755-041	CUSHION
2	1	X	D3755-1	COVER
3	1		D3753-1	SEAT FOAM
4		2	D3800-1-200-060	LOOP STRIP
5		1	D3800-1-100-300	LOOP STRIP (CUT/FIT AS REQ'D)
6		1	D3800-3-100-300	HOOK STRIP (CUT/FIT AS REQ'D)
7		A/R	SY-111	SURREY SILVER SUNSET UPHOLSTERY, MORBERN INC. P/N SY-111
8		A/R	THREAD	BONDED POLYESTER, 14.2 lb BREAK STRENGTH, GREY COLOR



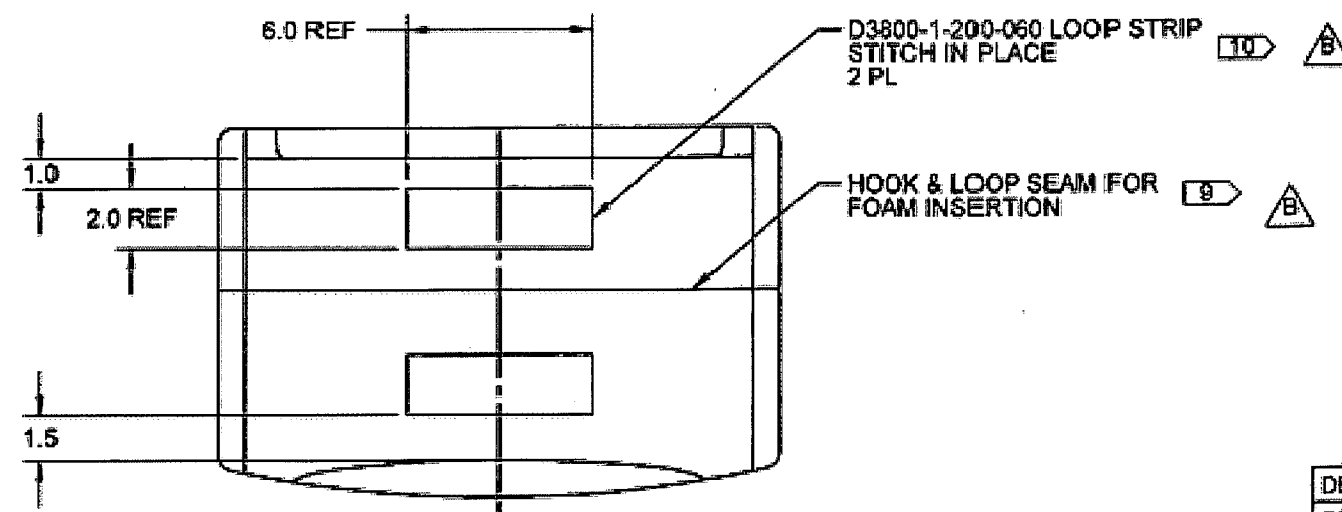
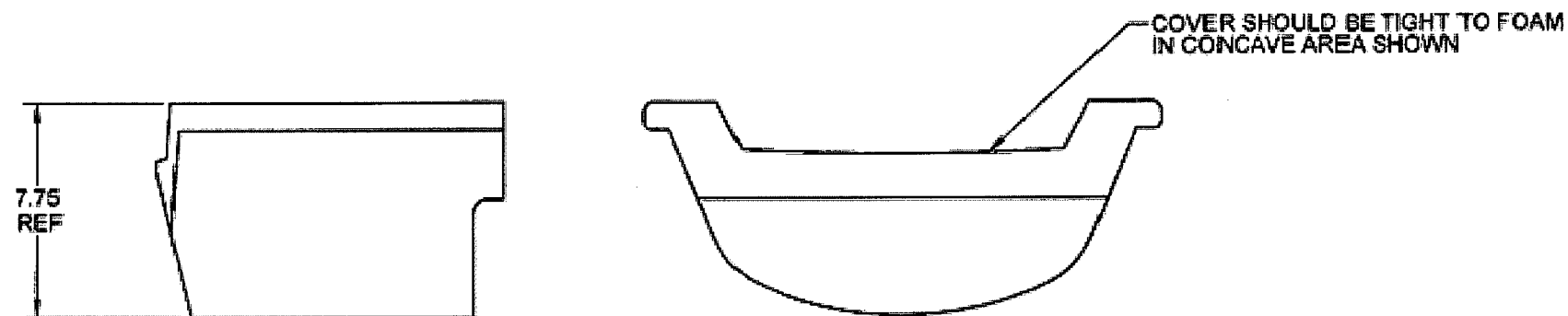
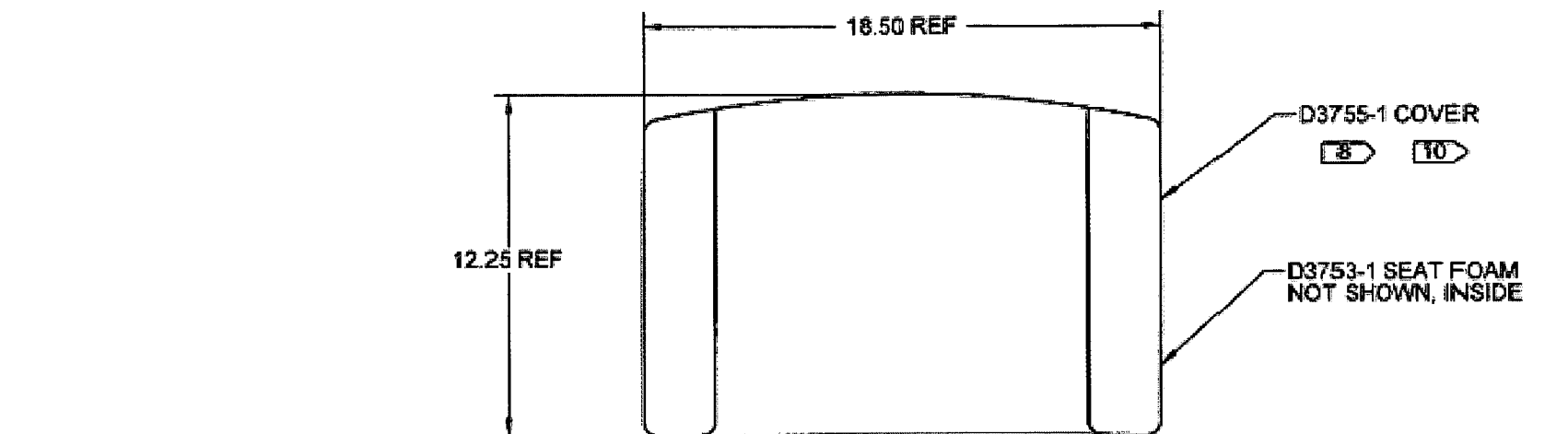
D3755-041 CUSHION

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: NONE
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3755-041" USING LABEL
- 7) WEIGHT: 3.0 lbs
- 8) SEW D3755-1 COVER TO FIT D3753-1 FOAM
- 9) STITCH D3800-1-100-300 LOOP AND D3800-3-100-300 HOOK STRIPS ALONG EDGE OF SEAM TO CLOSE COVER. INSTALL THE HOOK STRIP ON THE TOP OVERLAPPING FLAP. INSTALL THE LOOP STRIP ON FABRIC NEXT TO FOAM
- 10) STITCHING: 4-6 STITCHES PER INCH, USE MIN 1/2" BACKSTITCH, NO LOOSE THREADS
- 11) CUSHION SHAPE / FORM / PATTERN TO CONFORM WITH TEMPLATE DT9419

B	COVER NOW CLOSED WITH SINGLE SEAM (ZN A8-1, B3-2). D3800-1-100-300 WAS D3800-1-100-800 (D8-1), D3800-3-100-300 WAS D3800-3-100-800 (D8-1), ORIENTATION OF D3800-1-200-060 CHANGED (B3-2). ADD ITEM NUMBERS TO PART LIST (D8-1)	CP	08.10.21
A	NEW ISSUE	CP	08.09.09
REV.	DESCRIPTION	BY	DATE
DESIGN	GP		
DRAWN	GP		
CHECKED	PH		
MFG. APPR.	FE		
APPROVED	AD		
DE APPR.	TH		
DATE	08.10.21		
DART AEROSPACE LTD HAYKESBURY, ONTARIO, CANADA		REV. B SHEET 1 OF 2 SCALE NTS	
COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

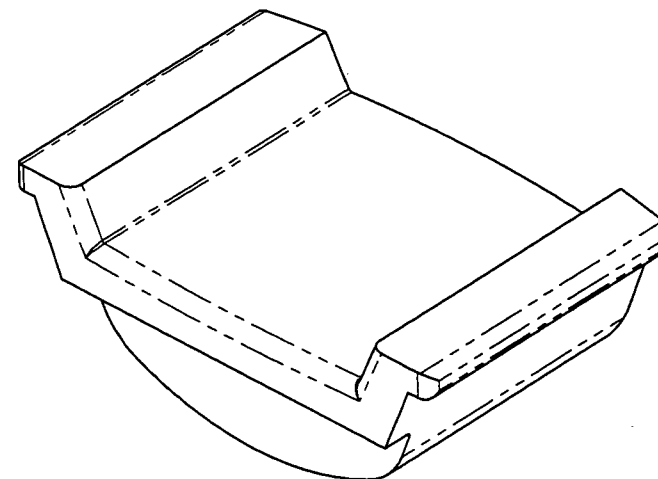
RELEASED
06/11/05SHOP COPY
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 43574



RELEASED
08/10/05

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WITHOUT NOTICE
WORK ORDER
NO. 4354

DESIGN	GP	DART AEROSPACE LTD	
DRAWN	GP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. B
MFG. APPR.	BE	D3755	SHEET 2 OF 2
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	CUSHION	NTS
DATE	08.10.21	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRELIMINARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



D3753-1 SEAT FOAM

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WITHOUT NOTICE
WORK ORDER
NO. 43542

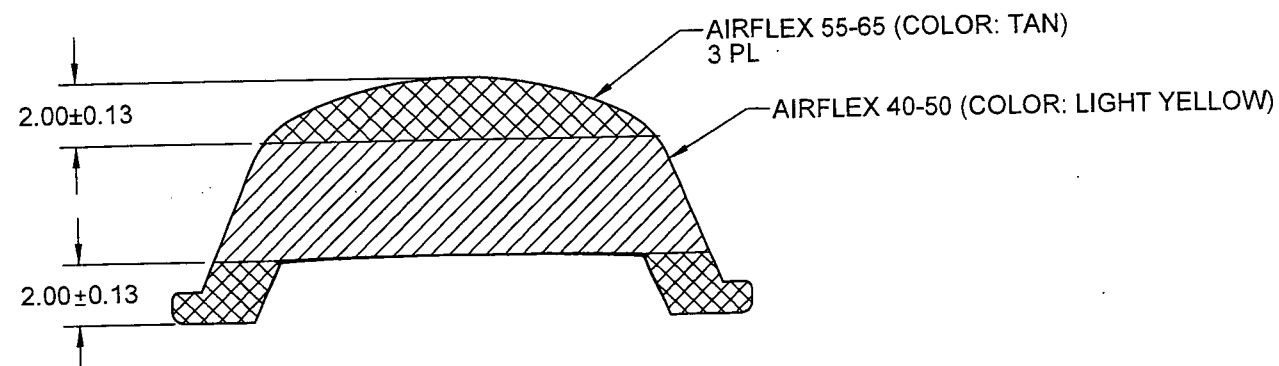
RELEASED
08/11/05

NOTES:

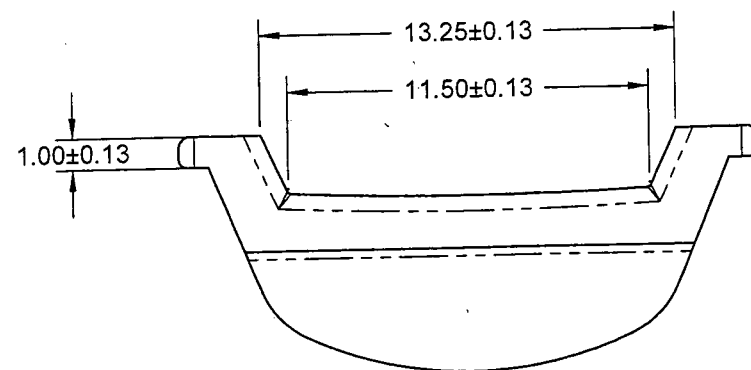
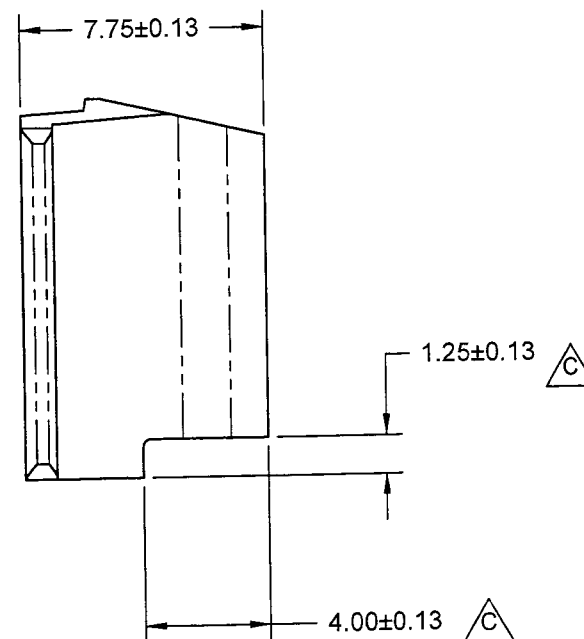
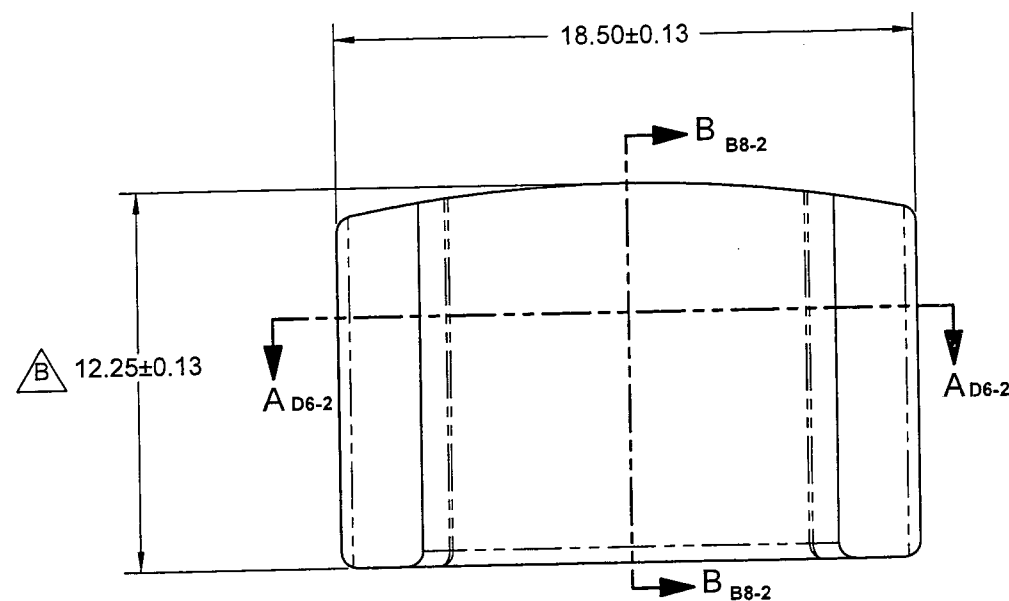
- 1) MATERIAL: AIRFLEX FIRE-RESISTANT AIRCRAFT CUSHIONING
GRADE 40-50 (COLOR: LIGHT YELLOW) LAMINATED TO GRADE 55-65 (COLOR: TAN)
WITH SILAPRENE DC12906 SPRAY GRADE HPL CONTACT ADHESIVE
SUPPLIER: CHESTNUT RIDGE FOAM INC., P/N 503330-99
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: NONE
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3753-1" USING PERMANENT MARKER
- 7) WEIGHT: 2.5 lbs
- 8) FOAM SHAPE TO CONFORM WITH TEMPLATE DT9027

C	CHG SHAPE TO MATCH CHESTNUT SAMPLE: 5.69 WAS 5.85 (B8-2), 4.00 WAS 4.25 (B3-2), 1.25 WAS 1.00 (B3-2)	CP	08.10.08
B	FOAM SHORTER TO AVOID CYCLIC, 12.25 WAS 16.75 (C7-2), 5.85 WAS 6.88 (B8-2), FRONT PROFILE CHANGED (B3-2)	CP	08.09.09
A	NEW ISSUE	CP	08.04.25
REV.	DESCRIPTION	BY	DATE
DESIGN	92	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	92		
CHECKED	PH	DRAWING NO.	REV. C
MFG. APPR.	E	D3753	SHEET 1 OF 2
APPROVED	140	TITLE	SCALE
DE APPR.	140	SEAT FOAM	NTS
DATE	08.10.08	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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WORK ORDER
NO. 43542



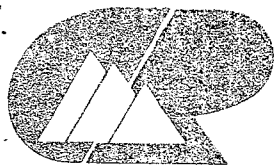
SECTION A-A C6-2



D3753-1 SEAT FOAM

RELEASED
08/11/05

DESIGN	GP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	GP		
CHECKED	PH	DRAWING NO. D3753	REV. C
MFG. APPR.	E	SHEET 2 OF 2	
APPROVED	MP	TITLE SEAT FOAM	SCALE NTS
DE APPR.	HA	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	08.10.08		



Chestnut Ridge
Foam, Inc.

CERTIFICATE OF CONFORMANCE

SOLD TO:
DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA

K6A1K7

PURCHASE ORDER: PO00007631
SALES ORDER: 33710
DATE SHIPPED: 12/12/08

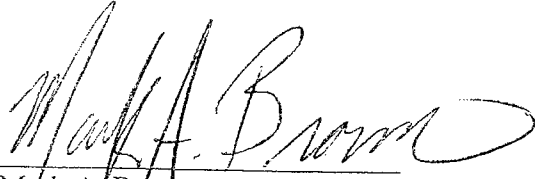
URGENT! FLAMMABILITY CERTIFICATE
ENCLOSED. PLEASE FORWARD TO
RECEIVING. DO NOT THROW AWAY

I certify that the material shipped against the above-referenced purchase order meets the following requirements:

14 CFR 25.853(a), APPENDIX F, PART 1(a)(1)(ii), AMENDMENT 25-116

Quantity	Customer Part Number	Part Number	Material	Batch Number
5	D3753-1	503330-99	AIRFLEX40-50	AF8046
			AIRFLEX55-65	AF8052
5	D3754-1	603150-99	AIRFLEX30-40	AF8052

MADE IN THE U.S.A


Mark A. Brown
Technical Director

CHESTNUT RIDGE FOAM INC.
VERTICAL BURN TEST # 11296
12-SECOND VERTICAL BUNSEN BURNER TEST
FOR CABIN AND CARGO COMPARTMENT MATERIALS
SHOWING COMPLIANCE TO THE REQUIREMENTS OF 14 CFR 25.853

PRODUCT : AIRFLEX
BATCH / LOT NO : AF8046
CUSTOMER : PRODUCTION
P.O. NO :
OTHER IDENTIFICATION : AFX 40-50

TEST BEING RUN : VERTICAL BUNSEN BURNER TEST: 12 SECOND IGNITION TIME

MATERIAL COMPOSITION : AIRFLEX

MATERIAL PATTERN : NA

MATERIAL COLOR : YELLOW

FLAME TEMPERATURE : 1571°F

CONDITIONING STARTED : DATE : 10-20-08
TIME : 7:30 AM

TEST STARTED : DATE : 10-21-08
TIME : 8:30 AM

S. S. 12/16

RESULTS :

	FLAME TIME (SECONDS)	DRIPPINGS (SECONDS)	BURN LENGTH (INCHES)
#1.	1.2	0.0	7.7
#2.	1.0	0.0	7.2
#3.	0.9	0.0	7.5
AVG.	1.0	0.0	7.5

PASS : X FAIL :

COMMENTS :

THIS MATERIAL MEETS THE REQUIREMENTS OF THE 14 CFR, PART 25, SECTION 25.853,
PARAGRAPH (a) AND APPENDIX F, PART 1, (a), (1), (ii).

TESTED BY : KELLY BURES
SR. LAB TECHNICIAN

Kelly Bures

CHESTNUT RIDGE FOAM INC.
VERTICAL BURN TEST # 11359
12-SECOND VERTICAL BUNSEN BURNER TEST
FOR CABIN AND CARGO COMPARTMENT MATERIALS
SHOWING COMPLIANCE TO THE REQUIREMENTS OF 14 CFR 25.853

PRODUCT : AIRFLEX
BATCH / LOT NO : AF8052
CUSTOMER : PRODUCTION
P.O. NO :
OTHER IDENTIFICATION : AFX 55-65

TEST BEING RUN : VERTICAL BUNSEN BURNER TEST: 12 SECOND IGNITION TIME

MATERIAL COMPOSITION : AIRFLEX

MATERIAL PATTERN : NA

MATERIAL COLOR : ORANGE

FLAME TEMPERATURE : 1556°F

CONDITIONING STARTED DATE : 12-4-08
TIME : 9:00 AM

TEST STARTED : DATE : 12-5-08
TIME : 9:40 AM

RESULTS :

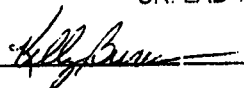
	FLAME TIME (SECONDS)	DRIPPINGS (SECONDS)	BURN LENGTH (INCHES)
#1.	0.5	0.0	6.5
#2.	3.0	0.0	6.6
#3.	5.1	0.0	7.0
AVG.	2.9	0.0	6.7

PASS : X FAIL :

COMMENTS :

THIS MATERIAL MEETS THE REQUIREMENTS OF THE 14 CFR, PART 25, SECTION 25.853,
PARAGRAPH (a) AND APPENDIX F, PART 1, (a), (1), (ii).

TESTED BY : KELLY BURES
SR. LAB TECHNICIAN



CHESTNUT RIDGE FOAM INC.
VERTICAL BURN TEST # 11356
12-SECOND VERTICAL BUNSEN BURNER TEST
FOR CABIN AND CARGO COMPARTMENT MATERIALS
SHOWING COMPLIANCE TO THE REQUIREMENTS OF 14 CFR 25.853

PRODUCT : AIRFLEX
BATCH / LOT NO : AF8052
CUSTOMER : PRODUCTION
P.O. NO :
OTHER IDENTIFICATION : AFX 30-40

TEST BEING RUN : VERTICAL BUNSEN BURNER TEST, 12 SECOND IGNITION TIME

MATERIAL COMPOSITION : AIRFLEX

MATERIAL PATTERN : NA

MATERIAL COLOR : GREEN

FLAME TEMPERATURE : 1556°F

CONDITIONING STARTED : DATE : 12-4-08
TIME : 9:00 AM

TEST STARTED : DATE : 12-5-08
TIME : 9:10 AM

RESULTS :

	FLAME TIME (SECONDS)	DRIPPINGS (SECONDS)	BURN LENGTH (INCHES)
#1.	0.0	0.0	5.5
#2.	0.0	0.0	6.0
#3.	0.0	0.0	6.1
AVG.	0.0	0.0	5.9

PASS : X FAIL :

COMMENTS :

THIS MATERIAL MEETS THE REQUIREMENTS OF THE 14 CFR, PART 25, SECTION 25.853,
PARAGRAPH (a) AND APPENDIX F, PART 1, (a), (1), (ii).

TESTED BY : KELLY BURES
SR. LAB TECHNICIAN

Kelly Bures



LEFEBVRE'S UPHOLSTERY

PO BOX 1965
CORNWALL, ON
K6H 6N7

Invoice

Date	Invoice #
06/01/2009	3378

Bill To
DART AEROSPACE LTD 1270 ABERDEEN ST HAWKESBURY, ON K6A 1K7

Ship To
DART AEROSPACE LTD 1270 ABERDEEN ST HAWKESBURY, ON K6A 1K7

P.O. No.	Terms	Rep	Ship	Via	F.O.B.
PO00007851	Due on Receipt	LP	06/01/2009	Courier	CORNWALL
Quantity	Item	Description		Price Each	Amount
5	SET	COVERS D3755-041 COVERS D3756-041		408.00	2,040.00T
		SURREY VINYL 111 SILVER SUNSET PACKING SLIP: 642878 DEC. 17 - 2008 THREAD BONDED POLYESTER UTILIZED Numéro d'entreprise : 885239855			

S. 09/01/09

			Subtotal	\$2,040.00
			GST	\$102.00
			PST	\$0.00
			Total	\$2,142.00
			Payments/Credits	\$0.00
			Balance Due	\$2,142.00

Phone #	Fax #	E-mail
613-938-3046	866-449-5408	globaltrends@myibocs.com

SURTEY

FROM THE DEFENSE FINISH COLLECTION

Specifications

- Nominal total thickness: .044 ± .045 inches (+4 ± +5 mils)
- Standard weight: 30.75 ± 1.5 ounces per linear yard
- Abrasion resistance: No significant wear after 200,000 double rubs with #8 cotton duck using the Wyzenbeek test method
- Anti-Bacterial/Anti-Microbial treatments
- -25° F cold crack resistance
- Anti-static finish
- Sulfide stain resistant
- Oil resistant
- Width: 54 inches
- Roll length: 40 yards

Flame Resistance

Manufactured to meet the following flammability* requirements

- Port Authorities of New York and New Jersey
- CID-A-A-2950-A (Formerly CCC-A-680a)
- Federal Standard 191A Test Method 5903.1
- Federal Specification CCC-A-700J
- FAA Regulation 25.853 (a) and Appendix F Part 1 (a) (i) (ii)
- NFPA 701-89 and 701-99 Small Scale Test
- FMVSS 302
- California Flammability Regulation (Bulletin 117, Section E)
- BIFMA Class A
- LFAC Class 1

* This term and all corresponding data refer to typical performance in the specific test indicated and should not be construed to imply the behavior of this or any other material under actual fire conditions.

Care and Cleaning Instructions

It is recommended that each stain is cleaned in a stepwise manner using the sequence below.

- Step 1: Regular cleaning (dirt and grime): Use mild soap and water, then fresh water rinse. Cleaning frequency depends on use. As a minimum, please clean weekly.
- Step 2: Stubborn stains (crayon, eye shadow, chocolate, blood): Wipe using a soft cloth or soft brush. Use detergent cleaners such as Formula 409 or Fantastik. Rinse with clean water and wipe dry.
- Step 3:** More difficult stains (ballpoint pen, lipstick, mustard, tar or asphalt): Carefully clean the stained area with lighter fluid or rubbing alcohol. Carefully rinse with clean water and dry. Note: For best results, immediate attention is required for severe stains.

** Caution: Exercise care as these solvents are flammable. Use only small quantities of solvents and keep clear of any source of ignition. Wear protective gloves and ensure cleaning takes place in a well ventilated area.

the
common
thread
for the
Care

MELLOHIDE
Brand 5

MATERIAL SAFETY DATA SHEET**Material Identification & Explanatory Information**

Material Name & Synonyms Vinyl; vinyl-coated fabric; leathercloth; synthetic leathercloth.
This MSDS is applicable exclusively to product use at temperatures under 150°F. It does not apply to product designed to be used in vacuforming at elevated temperatures.

CAS Name & Number Mixture

Manufacturer / Supplier Morbern Incorporated
80 Boundary Road, Cornwall, Ontario, Canada. K6H 6M1
Tel.: +01 613 932 8811 Fax: +01 613 932 0162 / 9779

Contact Daniel Julien, Environmental & Safety Manager, Morbern Inc.
Tel.: +01 613 937 2455

Document Preparation Date March 22, 2006

Material Uses Upholstery and trim

Summary of document

The format of this document is arranged in such a way as to proceed with the information in order of most likely requirement for a material which has a long history of popular domestic use with no practical hazardous characteristics known to the author which cannot be attributed to improper formulation or abuse.

Health Hazard Information

This material is typically a combination of films of polyvinyl chloride made flexible with plasticizers and containing various additives, which determine the desired physical, protective and aesthetic properties. The PVC films would normally, but not necessarily, be attached to a fabric for greater structural strength.

In accordance with the definition in the OSHA Hazard Communication Standard, 29CFR 1910.1200 and the Canadian CPR, these products are considered manufactured articles.

As a properly fused product, all the components are bound together, chemically and / or physically, as an intimate matrix for which there is no significant airborne emission under normal use, with the exception of residual V.O.C.s which will rapidly dissipate during processing.

Primary route(s) of entry: EYES depending on use SKIN depending on use
MOUTH no INHALATION depending on use

ACUTE EFFECTS

V.O.C.s present in the roll-form goods may cause nuisance irritation of the eyes, skin and respiratory organs.

Allergic and psychosomatic reactions

It is recognized that some individuals may display allergic or psychosomatic reactions to a wide range of commonly innocuous substances, which may include the material. There are no instances of such reactions known to the author, thus such reactions are assumed unusual and unpredictable. Notwithstanding, individuals with known allergic or psychosomatic conditions, or in a state of unusual physical sensitivity (e.g. pregnant; recovering from physical trauma or illness) should be considered at risk of reaction, and should be monitored, protected and treated accordingly. Notice of any such reactions should be reported to the author of this document.

CHRONIC EFFECTS

No evidence is known which suggests that the product should be the cause of any long-term-ill-health effects.

Toxicological Information

No toxicity data is available on these products. Since no exposure to the hazardous components occurs during normal use, it is expected to be non-toxic under normal conditions.

Ecological Information

This product is an inert solid. It is not expected to present any hazard to the environment under normal conditions.

Personal Protection Information

No special protective equipment should be necessary to handle the material, except in the situations detailed under "Engineering / Environmental Control" and to prevent contact that may result in allergic reaction.

Engineering / Environment Controls

Situation: High-speed cutting or abrasive (sanding) process.
Hazard: Nuisance, possibly irritant dust.
Control: Local extraction and ventilation; side-shielded goggles.
If extraction and ventilation is inadequate, a dust respirator (D, APF=5), selected with NIOSH approval under 42CFR 84, should be provided.

See the NIOSH "Guide to the Selection and Use of Particulate Respirators" (DHHS [NIOSH] publication 96-101) or the CSA publication Z94.4-93 "Selection, Use and Care of Respirators" for further selection guidelines.

First Aid Measures

Eyes (dust): Remove subject to clean air and encourage rapid blinking to produce tears, then flush the eye(s) with eyebath or lukewarm water for a minimum of 10 minutes. If symptoms persist or escalate, continue flushing the eye(s) with water and seek immediate professional medical attention.

Inhalation (dust): Remove subject to clean air, and, if necessary, encourage coughing to expel contaminant(s). If the subject complains of increasing irritation or constriction of the throat, as may be indicative of anaphylactic reaction, remain with the subject while immediate professional medical attention is being sought, in case the subject becomes distressed or unconscious and requires help with breathing.

- Skin** It is not perceived that any harm can be afflicted by the material on or through the skin, beyond the possibility of allergic or psychosomatic reactions. If skin irritation or blemishes do develop, wash on and around the affected area with non-abrasive, hypoallergenic soap and water and rinse well. If symptoms persist or escalate, seek professional medical attention.
- Ingestion** In the unlikely event that the material is actually swallowed (as may be possible in the case of an unsupervised child), it is advisable to seek professional medical advice concerning helping the passage or removal of the material, as the digestive process will not appreciably reduce the material to a convenient shape or size for evacuation. This advise if obviously the more essential the larger the ingested piece. There are no instances of vinyl ingestion known to the author, but common sense dictates that if any ill effects do develop beyond the expected cramps and discomfort associated with swallowing indigestible material, seek immediate professional medical attention.

Fire & Explosion Information

- Conditions of Flammability** The material is not flammable without the application of a persistent ignition source. Some types of the material are self-extinguishing.
- Hazardous Combustion Products** Principally carbon oxides, and hydrogen chloride (irritant, corrosive acid vesicant) and other organic gases.
- Extinguishing Media** Water, carbon dioxide, chemical foam, dry powder, sand, soil: selection depends on availability and placing of fire extinguishers and the severity of the fire.

Fire-Fighting Procedures & Equipment

For small, contained, undeveloped fires, alert the other occupants of the building, then use a recommended fire extinguisher according to the instructions on the canister. Follow standard evacuation and investigation procedures to be sure there is no further hazard.

Larger, manageable fires may be contained and / or extinguished by a properly trained and equipped fire-fighting team. The team should wear self-contained breathing apparatus with positive pressure, and protective clothing that meets the CAN / CGSB-155.20 standard is advisable. Immediate alarm and evacuation of the building is essential, and professional firefighters must be called for back up and assessment of further hazards.

Large, unmanageable fires must be left to professional fire fighters, as should any large fire in an area where an explosion is likely.

Breathing apparatus should continue to be worn when investigating further hazards in an enclosed space where there is still smoke and fumes and smouldering debris.

- Flash Point and Determination Method** Not determined.
- Flammability Limits** Not determined.
- Autoignition Temperature** Not determined.

Explosion Data**Sensitivity to Impact**

There are no incidents, nor references, nor records known to the author linking ignition of the material with physical shock.

Sensitivity to Static Discharge

There are no incidents nor references nor records known to the author linking ignition of the material to static discharge.

Reactivity Data**Conditions of Chemical
Instability**

Material is stable under normal conditions - no vigorous polymerization, decomposition nor condensation.

**Hazardous Decomposition
Products**

None.

Conditions of Reactivity

None: no self-reaction under conditions of shock or increase of temperature or pressure; also no reaction with water producing toxic gases.

Incompatible Substances

powerful oxidizing agents (e.g. perchlorate, dichromate) and strong acids over protracted exposure.

Spill & Disposal Information**Spill or Leak Procedure**

Not applicable.

Waste Disposal

Unused pieces of the material must be disposed of in strict accordance with federal, state / provincial and local regulations.
For guidelines on waste management, consult 40 CFR 221 through 229.

Physical & Chemical Properties**Physical State**

Solid

Appearance & Odour

Flexible sheet with leather-like appearance, colour varies; vague odour

Odour Threshold

Unknown

Specific Gravity (water = 1)

0.9 - 1.8

% Volatile

2 maximum

Vapour Pressure

Unknown

Vapour Density (air = 1)

Unknown

Evaporation Rate

Unknown

Solubility in Water

Negligible

Water Reactivity

None

Coeff. Water / Oil Distribution

Not applicable

pH	Not applicable
Melting Point	Significant softening above 200°F; molten flow above 400°F.
Boiling Point	Mixture of substances with variously interactive boiling ranges.

Preparation Information & Explanation of References

This document has been prepared using considerations outlined in the US DoL OSHA 29CFR Ch.XVII§1910.1200, paragraph (g) and the Justice Canada HPA CPR §12 and Schedule I.

For US technical and regulatory information, go to www.epa.gov/epahome/lawreg.htm, which in addition to USEPA-governed topics (air-, land- and water-pollution regulation), also contains links to the Code of Federal Regulations, the Federal Register, and specific state identification and regulation of materials perceived to be toxic.

For Canadian technical and regulatory information, go to www.hc-sc.gc.ca/ehp/ehd/psb/whmis/msds.htm, which in addition to the guidelines for preparation and use of safety data sheets, also contains direct links to all the regulatory, legislative, and informative sites necessary for control and use of materials perceived to be toxic.

Toxicological information quoted in this document was searched through:

OSHA 29CFR 1910, subpart Z "Toxic and Hazardous Substances"

(available through www.access.gpo.gov/nara/cfr/index.html)

HPA "Ingredient Disclosure List"

(available through <http://canada.justice.gc.ca/en/laws/H-3/SOR-88-64/txt.html>)

ACGIH "Guide To Occupational Exposure Values"

(available from ACGIH, Inc., 1330 Kemper Meadow Drive, Cincinnati, Ohio, 45240-1634)

NIOSH "Pocket Guide to Chemical Hazards"

(available from EPCRA Document Distribution Center, 11029 Kenwood Road, Cincinnati, Ohio, 45242)

US EPA "Emergency Planning and Community Right-To-Know §313 List of Toxic Chemicals"

(available from EPCRA Document Distribution Center, 11029 Kenwood Road, Cincinnati, Ohio, 45242)

"Hazardous Chemicals Desk Reference" - Sax & Lewis, Sr.

(Van Nostrand Reinhold : ISBN 0-442-28208-7)

Explanation of abbreviations

ACGIH:	American Conference of Governmental Industrial Hygienists
APF:	Assigned Protection Factor
CAN/CGSB:	Canadian General Standards Board
CAS:	Chemical Abstracts Service
CFR:	Code of Federal Regulations
ceiling:	The concentration that shall not be exceeded during the workday
CNS:	Central nervous system
CP65:	California Proposition 65
CPR:	Controlled Product Regulations
CSA:	Canadian Standards Association
DHHS:	Department of Health and Human Services
DoL:	Department of Labor
EPCRA:	Emergency Planning and Community Right-To-Know Act
HPA:	Hazardous Products Act
IARC:	International Agency for Research on Cancer
IDL:	Ingredient Disclosure List
IWCC:	Intergovernmental WHMIS Coordinating Committee
LC ₅₀ :	lethal concentration, administered by inhalation, required to kill 50% of a test population

Explanation of abbreviations

LD ₅₀ :	Lethal dosage, administered orally or cutaneously, required to kill 50% of a test population
mg/cu.m:	Milligrams per cubic meter
mg/kg:	Milligrams per kilogram (same as parts per million, on weight per weight basis)
mg/L:	Milligrams per liter (same as parts per million, on weight per volume basis)
mL/kg:	Milliliters per kilogram (same as parts per million, on volume per weight basis)
MSDS:	Material safety data sheet
NIOSH:	National Institute for Occupational Safety and Health
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limits
PPE:	Personal protective equipment
ppm:	Parts per million
PVC:	Polyvinyl chloride
STEL:	Short Term Exposure Limit-usually a 15 minute TWA that should not be exceeded during the workday
TLV:	Threshold Limit Values
TRI:	Toxics Release Inventory
TWA:	Time-Weighted Average exposure level for a conventional 8-hour workday in a 40 hour workweek.
US EPA:	United States Environmental Protection Agency
VOC:	Volatile organic compound (as defined in 40CFR Ch.1 §51.100 (s))
WHMIS:	Workplace hazardous Materials Information System